

Atty. Docket No. CPAC 1041-2
Appl. No. 10/618,933

PATENT

Remarks

Claims 1 - 58 are in the application. Claims 56 - 58 having been withdrawn previously as being directed to a nonelected invention, claims 1 - 55 are now under consideration in the application, and are now made subject to a Requirement for Election of Species.

Response to Requirement for Election of Species

Restriction was required to one of:

Species of multi-package module:

- A1. A multi-package module with a memory package stacked adjacent or partly to one side of the processor.
- A2. A multi-package module with a memory package stacked over a portion of the processor.

Species of type of processors:

- B1. A processor comprising a CPU.
- B2. A processor comprising a GPU.
- B3. A processor comprising a ASIC.

Species of type of first package:

- C1. A first package that is a BGA package.
- C2. A first package that is a LGA package.

If C2 is elected, species LGA package:

- D1. A LGA package with spacers.
- D2. A LGA package without spacers.
- D3. A LGA package with an upper LGA package inverted.

The election requirement is not well understood. Particularly:

(A) the Office action fails to either: identify generic claims or indicate that no generic claims are present; and

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(B) the Office action fails to clearly identify each of the disclosed species to which claims are restricted. Particularly, the species are not identified either as the species of figures 1, 2, and 3 or the species of examples I, II, and III, respectively, as is customary, and it is believed that there is no absence in this instance of figures or examples to identify the several alleged species.

(See, MPEP 809.02(a))

To the extent the election requirement can be understood, Applicants elect to prosecute species [A1, B2, C2, D3] in this application.

The distinction between A1 and A2 is not clear. A1 is selected as species of multi-package module in which, as well as can be understood, the memory package is stacked onto the module substrate, either adjacent the portion to which the processor is mounted (e.g. FIGs. 5C, 6C, 8, 9, 11) or partly to one side of the processor (e.g. FIGs. 1, 2).

The distinctions among D1, D2 and D3 are not clear. D3 is selected as species having a memory package, or a memory package assembly, in which at least one LGA package is inverted. It is noted that this includes unstacked LGA memory packages (e.g. FIGs. 2, 10, 11), as well as LGA memory package stacks in which the LGA packages are separated by spacers (e.g. FIGs. 7, 8, 9), as well as stacked die LGA memory packages in which the die may not be separated by spacers (e.g. FIGs. 10, 11).

Claims 1 - 3, 6, 8, 10, 11 - 13, 15 - 21, 25 - 28, 29 - 31, 34, 36, 38, 39 - 45, 49 - 53, 54, 55, 56 - 58 are believed to read on the elected Species. A list of claims follows:

1, 2, 3, 6, 8, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 25, 26, 27, 28, 29, 30, 31, 34, 36, 38, 39, 40, 41, 42, 43, 44, 45, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58.

It is believed that claim 1 is generic. Clarification is requested.

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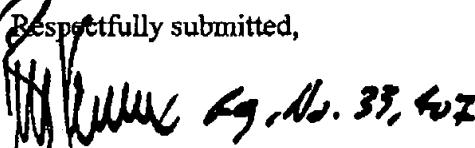
This election is made with traverse at least to the extent that the requirement demands restriction according to the types of processors (B1, B2, B3). It is not understood why the type of processor makes for patentable distinctiveness or requires burdensome search, and clarification is requested.

This reply is being filed within the one month's shortened statutory period set by the Examiner for response and, accordingly, no extension of time or fee is required in connection with the filing of this paper.

All the claims in the application are believed to be in condition for allowance, and action to that effect is respectfully requested.

If the Examiner determines that a conference would facilitate prosecution of this application, the Examiner is invited to telephone Applicant's representative, undersigned, at the telephone number set out below.

Respectfully submitted,


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